Permit #: #28.0801-29-001C

**Effective Date:** Draft



Steven M Pirner, Secretary Department of Environment and Natural Resources

# **Under the South Dakota Air Pollution Control Regulations**

Pursuant to Chapter 34A-1-21 of the South Dakota Codified Laws and the Air Pollution Control Regulations of the State of South Dakota and in reliance on statements made by the owner designated below, a permit to construct and operate is hereby issued by the Secretary of the Department of Environment and Natural Resources. This permit authorizes such owner to construct and operate the permitted unit(s) at the location designated below and under the listed conditions.

#### A. Owner

### 1. Company Name and Mailing Address

Montana-Dakota Utilities Co. a Division of MDU Resources Group 400 North Fourth Street Bismarck, North Dakota 58501

NorthWestern Energy 600 Market Street Huron, South Dakota 57350

Otter Tail Power Company Operator of Big Stone I 215 South Cascade Street PO Box 496 Fergus Falls, Minnesota 56538-0496

### 2. Actual Source Location if Different from Above

Portions of Section 11 and 13, Township 121N Range 47W and Section 7 Township 121N Range 46W, Grant County

48450 144<sup>th</sup> Street Big Stone City, SD 57216

### 3. Permit Contact

Terry Graumann, Manager Environmental Services (218) 739-8407

Draft i

# 4. Facility Contact

Jeff Endrizzi, Plant Manager (605) 863-6300

### 5. Responsible Official

Terry Graumann, Manager Environmental Services (218) 739-8407

### **B.** Permit Revisions

Not applicable

## **C.** Type of Operation

An electrical generation facility

Draft ii

# **Table of Contents**

		Page
1.0	STANDARD CONDITIONS	1
_,,	1.1 Construction and operation of source	
	1.2 Duty to comply	
	1.3 Property rights or exclusive privileges	
	1.4 Penalty for violating a permit condition	
	1.5 Inspection and entry	
	1.6 Severability	3
	1.7 Credible evidence.	3
2.0	CONSTRUCTION AND OPERATING PERMIT DEADLINES	3
	2.1 Commence construction.	3
	2.2 Submit operating permit application	3
	2.3 Initial startup of Unit #1 defined	4
3.0	PERMIT REVISIONS	4
	3.1 Administrative permit amendment	
	3.2 Reopening permit	
4.0	RECORDKEEPING AND REPORTING	4
	4.1 Recordkeeping and reporting	
	4.2 Construction date notification	
	4.3 Initial startup notification	
	4.4 Certification statement	
	4.5 Reporting permit violations	
5.0	CONTROL OF REGULATED AIR POLLUTANTS	6
	5.1 Visibility limit	
	5.2 Visibility exceedances	
	5.3 PM10 emission limit	
	5.4 Circumvention not allowed	
	5.5 Minimizing emissions	
6.0	BEST AVAILABLE RETROFIT TECHNOLOGY (BART)	7
•••	6.1 Installation of BART on Unit #1	
	6.2 PM10 BART emission limit for Unit #1.	
	6.3 Sulfur dioxide BART emission limit for Unit #1	
	6.4 Nitrogen oxide BART emission limit for Unit #1	
	6.5 Operation and maintenance of controls	
	6.6 Monitoring sulfur dioxide and nitrogen oxide emissions from Unit #1	8
	6.7 Initial performance test on Unit #1 for particulate matter	
	6.8 Annual performance test on Unit #1 for particulate matter	

# **Table of Contents**

			Page
	6.9	Monitoring requirements for Unit #1.	9
	6.10	Quarterly excess emission report	9
7.0	PEI	RFORMANCE TESTS	10
	<b>7.1</b>	Performance test may be required	
	7.2	Test methods and procedures	10
	7.3	Representative performance test	
	7.4	Submittal of test plan	
	7.5	Notification of test	
	<b>7.6</b>	Performance test report	11
	7.7	Initial performance test for PM10	
8.0	REG	COMMENDATION	11

### 1.0 STANDARD CONDITIONS

Construction and operation of source. In accordance with Administrative Rules of South Dakota (ARSD) 74:36:20:15(9), the owner or operator shall construct and operate the units, controls, and processes as described in Table 1-1 in accordance with the statements, representations, and supporting data contained in the complete permit application submitted and dated December 10, 2010, December 30, 2010, January 12, 2011, June 13, 2011 November 9, and November 28, 2011, unless modified by the conditions of this permit. Except as otherwise provided herein, the control device in Table 1-1 shall be operated in manner that achieves compliance with the conditions of this permit at all times. The application consists of the application forms, supporting data, and supplementary correspondence. If the owner or operator becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in an application, such information shall be promptly submitted.

Table 1-1 – Description of Permitted Units, Operations, and Processes

		Maximum	Control
Unit	Description	<b>Operating Rate</b>	Device
#1	1975 Babcock & Wilcox Company	5,609 million Btus	Baghouse
	balanced draft, cyclone-fired steam	per hour	
	boiler that is used to produce electricity		The boiler will be
	and provide steam to an ethanol plant.		retrofitted with a selective
	The boiler is equipped with an over-fire		catalytic reduction (SCR)
	air system and fired on subbituminous		system and separated over-
	coal and alternative fuels and wastes.		fire-air (SOFA) for nitrogen
			oxide $(NO_x)$ control and a
			semi-dry or dry flue gas
			desulfurization (FGD)
			system for sulfur dioxide
			(SO <sub>2</sub> ) control. Activated
			carbon injection will be
			installed for mercury
#34	Lima stamana sila	2 000 a stud subje	control.
#34	Lime storage silo.	3,000 actual cubic	Baghouse
#35	Code on otomogo silo	feet per minute	Doobouse
#35	Carbon storage silo.	2,500 actual cubic	Baghouse
#36a	Wests ECD storage sile. Vent #1	feet per minute 10,800 actual	Daghouga
#30a	Waste FGD storage silo – Vent #1.	· ·	Baghouse
		cubic feet per minute	
#26b	Wests ECD storage sile. Vent #2		Daghayaa
#36b	Waste FGD storage silo – Vent #2.	10,800 actual	Baghouse
		cubic feet per minute	
		mmute	

		Maximum	Control
Unit	Description	Operating Rate	Device
#37a	Recycle storage silo – Vent #1. 1	2,500 actual cubic	Baghouse
		feet per minute	
#37b	Recycle storage silo – Vent #2. 1	2,500 actual cubic	Baghouse
		feet per minute	
#38a	Hydrated lime storage silo – Vent #1. <sup>2</sup>	3,000 actual cubic	Baghouse
		feet per minute	
#38b	Hydrated lime storage silo – Vent #2. <sup>2</sup>	3,000 actual cubic	Baghouse
		feet per minute	
#39	Hydrator. <sup>2</sup>	5,000 actual cubic	Baghouse
		feet per minute	
#40	Hydrator buffer bin. <sup>2</sup>	950 actual cubic	Baghouse
		feet per minute	

<sup>&</sup>lt;sup>1</sup> – Unit will only be installed if the semi-dry flue gas desulfurization system is installed.

- **1.2 Duty to comply.** In accordance with ARSD 74:36:20:15(12)(a) and (c), the owner or operator shall construct and operate in compliance with the conditions of this permit. An owner or operator who knowingly makes a false statement in any record or report or who falsifies, tampers with, or renders inaccurate, any monitoring device or method is in violation of this permit. A violation of any condition in this permit is grounds for enforcement, reopening this permit, permit termination, or denial of an application to operate. The owner or operator, in an enforcement action, cannot use the defense that it would have been necessary to cease or reduce the permitted activity to maintain compliance. The owner or operator shall provide any information requested by the Secretary to determine compliance or whether cause exists for reopening or terminating this permit.
- 1.3 Property rights or exclusive privileges. In accordance with ARSD 74:36:20:15(12)(b), the issuance of this permit, adoption of design criteria, and approval of plans and specifications does not convey any property rights of any sort, any exclusive privileges, any authorization to damage, injure or use any private property, any authority to invade personal rights, any authority to violate federal, state or local laws or regulations, or any taking, condemnation or use of eminent domain against any property owned by third parties. The State does not warrant the owner's or operator's compliance with this permit, design criteria, approved plans and specifications, and operation under this permit, will not cause damage, injury or use of private property, an invasion of personal rights, or violation of federal, state or local laws or regulations. The owner or operator is solely and severally liable for all damage, injury or use of private property, invasion of personal rights, infringement of federal, state or local laws and regulations, or taking or condemnation of property owned by third parties, which may result from actions taken under the permit.

<sup>&</sup>lt;sup>2</sup> – Unit will only be installed if the dry flue gas desulfurization system is installed.

- **1.4** Penalty for violating a permit condition. In accordance with South Dakota Codified Laws (SDCL) 34A-1-39 and 34A-1-47, a violation of a permit condition may subject the owner or operator to civil or criminal prosecution, a state penalty of not more than \$10,000 per day per violation, injunctive action, administrative permit action, and other remedies as provided by law.
- **1.5** <u>Inspection and entry.</u> In accordance with SDCL 34A-1-41, the owner or operator shall allow the Secretary to:
- 1. Enter the premises where a regulated activity is located or where pertinent records are stored;
- 2. Have access to and copy any records that are required under this permit;
- 3. Inspect the construction and operations regulated under this permit; and/or
- 4. Sample or monitor any substances or parameters for the purpose of assuring compliance.
- **1.6** <u>Severability.</u> In accordance with ARSD 74:36:20:15(11), any portion of this permit that is void or challenged shall not affect the validity of the remaining permit requirements.
- **1.7** <u>Credible evidence.</u> In accordance with ARSD 74:36:13:07, credible evidence may be used for the purpose of establishing whether the owner or operator has violated or is on violation of this permit. Credible evidence is as follows:
- 1. Information from the use of the following methods is presumptively credible evidence of whether a violation has occurred at the source:
  - a. A monitoring method approved for the source pursuant to 40 CFR § 70.6(a)(3) and incorporated in this permit; or
  - b. Compliance methods specified in an applicable plan;
- 2. The following testing, monitoring, or information gathering methods are presumptively credible testing, monitoring, or information-gathering methods:
  - a. Any monitoring or testing methods approved in this permit, including those in 40 CFR Parts 51, 60, 61, and 75; or
  - b. Other testing, monitoring, or information-gathering methods that produce information comparable to that produced by any method in section (1) or (2)(a).

### 2.0 CONSTRUCTION AND OPERATING PERMIT DEADLINES

- **Commence construction.** In accordance with ARSD 74:36:20:21, this permit becomes invalid if the owner or operator has not commenced construction within 18 months of the effective date of this permit; discontinued construction for a period of 18 months or more; or construction is not completed within 10 years of the effective date of this permit.
- **2.2** Submit operating permit application. In accordance with ARSD 74:36:20:20, the owner or operator shall submit a complete permit application for an operating permit pursuant to ARSD 74:36:05. A complete permit application for a Title V air quality operating permit shall be submitted within 12 months after the initial startup of Unit #1.

**2.3** Initial startup of Unit #1 defined. In accordance with ARSD 74:36:20:15(10), the term "initial startup of Unit #1" means the first time exhaust gases from Unit #1, while firing coal, are passed through the control equipment identified in Table 1-1.

### 3.0 PERMIT REVISIONS

- 3.1 Administrative permit amendment. In accordance with ARSD 74:36:20:16 and 74:36:20:17, the Secretary shall determine whether an administrative permit amendment is applicable to a proposed revision within 15 days from receiving a request for a permit revision. The Secretary shall issue an administrative permit amendment without the procedural requirements applicable to obtaining this construction permit. As provided in ASRD 74:36:01:03, the Secretary considers a proposed revision an administrative permit amendment if the proposed revision accomplishes one of the following:
- 1. Corrects typographical errors;
- 2. Changes the name, address, or phone number of any person identified in this permit or provides a similar minor administrative change at the source;
- 3. Requires more frequent monitoring or reporting by the source;
- 4. The ownership or operational control of a source changes and the Secretary determines that no other change in this permit is necessary. However, the new owner must submit a certification of applicant form and a written statement specifying the date for transfer of operating permit responsibility, coverage, and liability; or
- 5. Any other change that the Secretary determines to be similar to those requirements in this condition.
- **Reopening permit.** In accordance with ARSD 74:36:20:18 and 74:36:20:19, the Secretary may reopen this permit for further review if the Secretary determines the permit contains a material mistake in establishing the emissions standard or limits or other requirements of the construction permit or the Secretary determines the construction permit must be revised to ensure compliance with the applicable requirements of ARSD 74:36 and the federal Clean Air Act. The Secretary shall notify the owner or operator 30 days prior to reopening a construction permit or in a shorter time period in an emergency. The reopening of this construction permit shall follow the same procedural requirements to issue a construction permit and shall affect only those parts of the permit for which cause to reopen exist.

### 4.0 RECORDKEEPING AND REPORTING

**4.1** Recordkeeping and reporting. In accordance with ARSD 74:36:20:15(10), the owner or operator shall maintain all monitoring data, records, reports, and pertinent information specified by this permit for five years from the date of sample, measurement, report, or

application. The records shall be maintained on site for the first two years and may be maintained off site for the last three years. All records must be made available to the Secretary for inspection. All notifications and reports shall be submitted to the following address:

South Dakota Department of Environment and Natural Resources PMB 2020, Air Quality Program 523 E. Capitol, Joe Foss Building Pierre, SD 57501-3181

- **Construction date notification.** In accordance with ARSD 74:36:20:15(10), the owner or operator shall notify the Secretary of the date construction commences, as defined in ARSD 74:36:01:21, on the Unit #1 emission control project. The notification shall be postmarked within 15 days after the date construction commenced.
- **4.3** Initial startup notification. In accordance with ARSD 74:36:20:15(10), the owner or operator shall notify the Secretary of the actual date of the initial startup of the Unit #1emission control project. The notification shall be postmarked within 15 days after the date of initial startup of Unit #1.
- **4.4** <u>Certification statement.</u> In accordance with ARSD 74:36:20:15(10), all documents required by this permit, including application forms, reports, and compliance certification, must be certified by a responsible official or a duly authorized representative. The certification shall include the following statement:

"I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this document and all attachments are true, accurate, and complete."

**Reporting permit violations.** In accordance with ARSD 74:36:20:15(10), the owner or operator shall report all permit violations. A permit violation should be reported as soon as possible, but no later than the first business day following the day the violation was discovered. The permit violation may be reported by telephone to the South Dakota Department of Environment and Natural Resources at (605) 773-3151 or by FAX at (605) 773-5286.

A written report shall be submitted within five days of discovering the permit violation. Upon prior approval from the Secretary, the submittal deadline for the written report may be extended up to 30 days. The written report shall contain:

- 1. A description of the permit violation and its cause(s);
- 2. The duration of the permit violation, including exact dates and times; and
- 3. The steps taken or planned to reduce, eliminate, and prevent reoccurrence of the permit violation.

### 5.0 CONTROL OF REGULATED AIR POLLUTANTS

- **Visibility limit.** In accordance with ARSD 74:36:12:01, the owner or operator may not discharge into the ambient air an air contaminant of a density equal to or greater than that designated as 20 percent opacity from any permitted unit, operation, or process listed in Table 1-1, unless otherwise specified in this permit. This provision does not apply when the presence of uncombined water is the only reason for failure to meet the requirement.
- **Visibility exceedances.** In accordance with ARSD 74:36:12:02, an exceedance of the operating limit in permit condition 5.1 is not considered a violation during brief periods of soot blowing, start-up, shutdown, or malfunctions. A malfunction is described as any sudden and unavoidable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. A failure caused entirely or in part by poor maintenance, careless operation, preventable equipment breakdown, or any other cause within the control of the owner or operator of the source is not a malfunction and is considered a violation.
- **5.3 PM10 emission limit.** In accordance with ARSD 74:36:20:15(9), the owner or operator shall limit air emissions of particulate less than or equal to 10 microns in diameter (PM10) from the permitted units to less than or equal to the emission limits in Table 5-1.

Table 5-1 – PM10 Emission Limits

Unit	Description	PM10 Emission Limit <sup>3</sup>
#34	Lime storage silo.	0.01 grains per dry standard cubic foot
#35	Carbon storage silo.	0.01 grains per dry standard cubic foot
#36a	Waste FGD storage silo – Vent #1.	0.01 grains per dry standard cubic foot
#36b	Waste FGD storage silo – Vent #2.	0.01 grains per dry standard cubic foot
#37a	Recycle storage silo – Vent #1. 1	0.01 grains per dry standard cubic foot
#37b	Recycle storage silo – Vent #2. 1	0.01 grains per dry standard cubic foot
#38a	Hydrated lime storage silo – Vent #1. <sup>2</sup>	0.01 grains per dry standard cubic foot
#38b	Hydrated lime storage silo – Vent #2. <sup>2</sup>	0.01 grains per dry standard cubic foot
#39	Hydrator. <sup>2</sup>	0.01 grains per dry standard cubic foot
#40	Hydrator buffer bin. <sup>2</sup>	0.01 grains per dry standard cubic foot

<sup>&</sup>lt;sup>1</sup> – Unit will only be installed if the semi-dry flue gas desulfurization system is installed.

**Circumvention not allowed.** In accordance with ARSD 74:36:20:24, the owner or operator may not install, use a device, or use a means that conceals or dilutes an air emission that would otherwise violate this permit. This includes operating a unit or control device that emits air pollutants from an opening other than the designed stack, vent, or equivalent opening.

<sup>&</sup>lt;sup>2</sup> – Unit will only be installed if the dry flue gas desulfurization system is installed.

<sup>&</sup>lt;sup>3</sup> – Compliance with the emission limit is based on the average of three test runs using the performance test procedures and requirements in Chapter 7.0.

**Minimizing emissions.** In accordance with ARSD 74:36:20:15(9), the owner or operator shall at all time, when practicable, maintain and operate all permitted units in a manner that minimizes air pollution emissions.

### 6.0 BEST AVAILABLE RETROFIT TECHNOLOGY (BART)

- **Installation of BART on Unit #1.** In accordance with ARSD 74:36:21:07, the owner or operator shall install and operate the control equipment identified in Table1-1 as expeditiously as practicable, but not later than five years from EPA's approval of South Dakota's implementation plan for regional haze.
- **6.2 PM10 BART emission limit for Unit #1.** In accordance with ARSD 74:36:21:06, the owner or operator shall not allow the emissions of filterable particulate matter 10 microns in diameter or less (PM10) in excess of the emission limits specified in Table 6-1.

Table 6-1 – PM10 BART Emission Limits

Unit	Emission Limit	
#1	67.3 pounds per hour, which includes periods of startup and shutdown	
#1	0.012 pounds per million Btu, which includes periods of startup and shutdown	

Compliance with the filterable PM10 emission limits shall be based on an annual stack performance test using the performance test methods in Chapter 7.0 of this permit and using the average of three 1-hour test runs.

**6.3** Sulfur dioxide BART emission limit for Unit #1. In accordance with ARSD 74:36:21:06, the owner or operator shall not allow the emissions of sulfur dioxide in excess of the emission limits specified in Table 6-2.

Table 6-2 –Sulfur Dioxide BART Emission Limits

Unit	Emission Limit	
	505 pounds per hour, which includes periods of startup, shutdown, and malfunction	
#1	0.09 pounds per million Btu, which includes periods of startup, shutdown, and malfunction	

Compliance with the sulfur dioxide emission limits shall be based on using continuous emission monitoring systems and a 30-day rolling average. The 30-day rolling average shall be calculated in accordance with ARSD 74:36:21:02(10).

**6.4** Nitrogen oxide BART emission limit for Unit #1. In accordance with ARSD 74:36:21:06, the owner or operator shall not allow the emissions of nitrogen oxide in excess of the emission limits specified in Table 6-3.

Table 6-3 –Nitrogen Oxide BART Emission Limits

Unit	Emission Limit	
	561 pounds per hour, which includes periods of startup, shutdown, and malfunction	
#1	0.10 pounds per million Btu, which includes periods of startup, shutdown, and	
	malfunction	

Compliance with the nitrogen oxide emission limits shall be based on using continuous emission monitoring systems and a 30-day rolling average. The 30-day rolling average shall be calculated in accordance with ARSD 74:36:21:02(10).

- **Operation and maintenance of controls.** In accordance with ARSD 74:36:21:08, the owner or operator shall develop, maintain, and implement a written Operation, Maintenance, and Monitoring plan for the control equipment identified in Table 1-1 for Unit #1. The Operation, Maintenance, and Monitoring plan shall be submitted to the Secretary with the application required in permit condition 2.2. Any subsequent changes to the plan must be submitted to the Secretary for review and approval. Pending approval by the Secretary of an initial or amended plan, the owner or operator must comply with the provisions of the submitted plan. Each plan must contain the following information:
  - 1. A maintenance schedule for each control device associated with Unit #1 that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance;
  - 2. Procedures for the proper operation and maintenance of each control device associated with Unit #1; and
  - 3. Parameters to be monitored to determine each control device associated with Unit #1 is being operated properly.
- Monitoring sulfur dioxide and nitrogen oxide emissions from Unit #1. In accordance with ARSD 74:36:21:09, the owner or operator shall route all exhaust gases from Unit #1 to the main stack of Unit #1. The owner or operator shall install, certify, maintain, calibrate and operate a continuous emission monitoring system on Unit #1 for sulfur dioxide and nitrogen oxide in accordance with 40 CFR Part 75 (July 1, 2009), except the recordkeeping and reporting requirements for the continuous emission monitoring systems shall be in accordance with 40 CFR § 60.7 (July 1, 2009).
- **Initial performance test on Unit #1 for particulate matter.** In accordance with ARSD 74:36:21:07, the owner or operator shall conduct an initial performance test on Unit #1 for particulate matter 10 microns in diameter or less within 180 days of initial startup of Unit #1 or

within five years from EPA's approval of South Dakota's state implementation plan for regional haze, whichever is earlier. The initial performance test shall follow the procedures outlined in Chapter 7.0.

- **Annual performance test on Unit #1 for particulate matter.** In accordance with ARSD 74:36:21:06, the owner or operator shall conduct an annual performance test on Unit #1 for filterable particulate matter 10 microns in diameter or less. The annual performance tests shall follow the procedures outlined in Chapter 7.0 and each performance test shall be conducted between 10 to 14 months from the date of the previous test starting with the initial performance test in permit condition 6.7.
- **6.9** Monitoring requirements for Unit #1. In accordance with ARSD 74:36:21:09, the owner or operator shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of Unit #1; any malfunction of the air pollution control equipment associated with Unit #1; or any periods during which the sulfur dioxide and/or nitrogen oxide continuous monitoring system is inoperative.
- **6.10 Quarterly excess emission report.** In accordance with ARSD 74:36:21:09, the owner or operator shall submit a quarterly excess emission report. The quarterly excess emission report shall contain the following information:
  - 1. Name of the facility, permit number, reference to this permit condition, and identify the submittal as a quarterly report;
  - 2. Calendar dates covered in the quarterly report;
  - 3. A summary of the excess emissions as determined by the continuous emission monitoring systems on Unit #1 for sulfur dioxide and nitrogen oxide. The summary of excess emissions shall include the following:
    - a. The magnitude of sulfur dioxide and nitrogen oxide emissions in excess of the appropriate emission limit in permit condition 6.3 and 6.4;
    - b. The date and duration of the excess emissions;
    - c. The cause of the excess emissions (e.g., startup/shutdown, control equipment problems, process problems, other known causes, or unknown causes); and
    - d. The percentage of time the sulfur dioxide and nitrogen oxide excess emissions occurred during the operation of Unit #1;
  - 4. The date and time the continuous emission monitoring systems on Unit #1 for sulfur dioxide and nitrogen oxide were down due to monitoring equipment malfunction, non-monitoring malfunction, quality assurance calibrations, other known causes, or unknown causes;
  - 5. The percentage of time the sulfur dioxide and nitrogen oxide continuous emission monitoring system for Unit #1 was down while Unit #1 was in operation; and
  - 6. If no excess emissions have occurred or the continuous emission monitoring system was operating at all times Unit #1 was operating, such information shall be stated in the quarterly report.

The initial quarterly report shall be postmarked by the 30<sup>th</sup> day following the end of the first quarter in which the initial startup of Unit #1 occurs. The remaining quarterly reports shall be postmarked by the 30<sup>th</sup> day following the end of the reporting period.

### 7.0 PERFORMANCE TESTS

- **7.1** Performance test may be required. In accordance with ARSD 74:36:11:02, the Secretary may request a performance test. A performance test shall be conducted while operating the unit at or greater than 90 percent of its maximum design capacity, unless otherwise specified by the Secretary. A performance test that is conducted while operating at less than 90 percent of its maximum design capacity will result in the operation being limited to the percent achieved during the performance test. The Secretary has the discretion to extend the deadline for completion of the performance test required by the Secretary if circumstances reasonably warrant but will not extend the deadline past a federally required performance test deadline.
- **Test methods and procedures.** In accordance with ARSD 74:36:11:01, the owner or operator shall conduct the performance test in accordance with 40 CFR Part 60, Appendix A, 40 CFR Part 63, Appendix A, and 40 CFR Part 51, Appendix M. The Secretary may approve an alternative method if a performance test specified in 40 CFR Part 60, Appendix A, 40 CFR Part 63, Appendix A, and 40 CFR Part 51, Appendix M is not applicable or required.
- **Representative performance test.** In accordance with ARSD 74:36:07:01, as referenced to 40 CFR § 60.8(c), performance tests shall be conducted under such conditions as the Secretary shall specify to the owner or operator based on the representative performance of the unit being tested. The owner or operator shall make available to the Secretary such records as may be necessary to determine the conditions of the performance tests. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test nor shall emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction be considered a violation of the applicable emission limit unless otherwise specified in this permit.
- **7.4** Submittal of test plan. In accordance with ARSD 74:36:11:01, the owner or operator shall submit the proposed testing procedures to the Secretary at least 30 days prior to any performance test. The Secretary will notify the owner or operator if the proposed test procedures are approved or denied. If the proposed test procedures are denied, the Secretary will provide written notification that outlines what needs to be completed for approval.
- **7.5** Notification of test. In accordance with ARSD 74:36:11:03, the owner or operator shall notify the Secretary at least 10 days prior to the start of a performance test to arrange for an agreeable test date when the Secretary may observe the test. The Secretary may extend the

deadline for the performance test in order to accommodate schedules in arranging an agreeable test date.

- **7.6 Performance test report.** In accordance with ARSD 74:36:20:15(10), the owner or operator shall submit a performance test report to the Secretary within 60 days after completing the performance test or by a date designated by the Secretary. The performance test report shall contain the following information:
  - 1. Description of the process and the air pollution control system being tested;
  - 2. Sampling location description(s);
  - 3. A description of sampling and analytical procedures and any modifications to standard procedures;
  - 4. Test results expressed in units consistent with the applicable emission limit;
  - 5. Quality assurance procedures and results;
  - 6. Records of unit's operating conditions during the test (e.g., operating rate, fuel type);
  - 7. Raw data sheets for field sampling and field and laboratory analyses;
  - 8. Documentation of calculations;
  - 9. All data recorded and used to establish parameters for compliance monitoring; and
  - 10. Any other information required by the test method.
- **7.7** Initial performance test for PM10. In accordance with ARSD 74:36:11:02, the owner or operator shall conduct an initial performance test within 180 days after initial startup of Unit #1 to determine the emission rate of particulate matter 10 microns in diameter or less (filterable) on the following units:
  - 1. Unit #34, #38a, #38b, or #40;
  - 2. Unit #35:
  - 3. Unit #36a or #36b;
  - 4. Unit #37a or #37b; and
  - 5. Unit #39.

### 8.0 **RECOMMENDATION**

A review of this facility indicates it can operate in compliance with South Dakota's Air Pollution Control rules and the federal Clean Air Act. The Secretary, therefore, recommends that the Board of Minerals and Environment issue this construction permit with conditions to ensure compliance with SDCL 34A-1 and the federal Clean Air Act. Any questions pertaining to the Secretary's recommendation should be directed to Marlys Heidt, Engineer III, at (605) 773-4213.